64TH CONGRESS, 1st Session. } HOUSE OF REPRESENTATIVES. { DOCUMENT No. 470.

CALUMET RIVER, ILL.

LETTER

FROM

THE SECRETARY OF WAR,

TRANSMITTING,

WITH A LETTER FROM THE CHIEF OF ENGINEERS, REPORT ON REEXAMINATION OF CALUMET RIVER, ILL.

JANUARY 5, 1916.—Referred to the Committee on Rivers and Harbors and ordered to be printed, with illustration.

WAR DEPARTMENT,
Washington, January 3, 1916.

The SPEAKER OF THE HOUSE OF REPRESENTATIVES.

SIR: I have the honor to transmit herewith, a letter from the Chief of Engineers, United States Army, dated 27th ultimo, together with copies of reports from Lieut. Col. W. V. Judson and the Board of Engineers for Rivers and Harbors, dated May 28, 1915, and June 30, 1915, with map, on reexamination of Calumet River, Ill., made in compliance with the provisions of the river and harbor act approved March 4, 1915.

Very respectfully,

LINDLEY M. GARRISON,
Secretary of War.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF ENGINEERS,
Washington, December 27, 1915.

From: The Chief of Engineers, United States Army.
To: The Secretary of War.
Subject: Reexamination of Calumet River, Ill.

1. Under authority contained in section 14 of the river and harbor act approved March 4, 1915, there are submitted herewith for transmission to Congress report dated May 28, 1915, with map by Lieut.

Col. W. V. Judson, Corps of Engineers, and report dated June 30, 1915, by the Board of Engineers for Rivers and Harbors, relative to the project for improvement of Calumet River, Ill.

2. The present project provides for a channel 21 feet deep and 200 feet wide up to the Forks, a distance of 5.47 miles; the construction of five turning basins of the same depth; and for the acquisition by donation to the United States of the necessary land for a channel 200 feet wide from the Forks to a point on the Grand Calumet River one-half mile above Hammond, Ind. Due to the change in the limits of the town of Hammond, there is some uncertainty as to the authorized upper limit of the project. The location heretofore adopted is about one-half mile from the junction of the Indiana Harbor Canal and the Grand Calumet River. The district officer states that the junction is the logical place for the limit of the improvement, and he recommends that the project be modified accordingly. The division engineer and the Board of Engineers for Rivers and Harbors concur in this opinion.

3. After due consideration of the above-mentioned reports, I concur in the views of the district officer, the division engineer, and the Board of Engineers for Rivers and Harbors, and therefore recommend that legislation be enacted defining the upper limit of the Calumet River project to be the junction of the Grand Calumet River and the Indiana Harbor Canal.

DAN C. KINGMAN,
Chief of Engineers, United States Army.

REPORT OF THE BOARD OF ENGINEERS FOR RIVERS AND HARBORS.

[Third indorsement.]

THE BOARD OF ENGINEERS FOR RIVERS AND HARBORS,
June 30, 1915.

To the CHIEF OF ENGINEERS, UNITED STATES ARMY:

1. This report on the Calumet River, Ill., is submitted under authority of that portion of section 14 of the act of March 4, 1915, which reads:

> And the Chief of Engineers is directed to make a report upon any other projects, river or harbor, the further improvement of which under present conditions is undesirable, or in which modifications of the plans or projects should be made.

2. The present project provides for a channel 21 feet deep and 200 feet wide up to the Forks, a distance of 5.47 miles; the construction of five turning basins of the same depth; and for the acquisition, by donation to the United States, of the necessary land for a channel 200 feet wide from the Forks upward via the Calumet and the Grand Calumet to a point one-half mile above Hammond, Ind.

3. The project has been practically completed up to the Forks, except for some widening and the construction of two turning basins, not at present urgently needed, and this part is satisfactory. The same may be said of that part which provides for the acquisition of land to a point one-half mile above Hammond, except as to this limit, which is indefinite in that it is not clear whether it refers to the bridge mentioned by the district officer or to the former limit of Hammond,

which has since been changed. The location hitherto adopted for this point falls about one-half mile short of the junction of the Indiana Harbor Canal and the Grand Calumet River, which, for reasons explained by the district officer, is the logical place for the termination of the project. In view of these conditions the district officer recommends that this part of the project be modified so that the upper limit shall be at the intersection of the Grand Calumet and Indiana Harbor Canal. The division engineer concurs with the district officer.

4. It seems clear that it would be in the interests of this project and the locality at large to have the short reach of about one-half mile between the probable present head of the Calumet project and the Indiana Harbor project included in the former as explained by the district officer. The board therefore concurs and recommends that legislation be enacted defining the upstream limit of the project at the junction of the Grand Calumet River and the Indiana Harbor Canal.

For the board:

W. M. Black,
Colonel, Corps of Engineers,
Senior Member of the Board.

REEXAMINATION OF CALUMET RIVER, ILL.

United States Engineer Office,
Chicago, Ill., May 28, 1915.

From: The District Engineer Officer.
To: The Chief of Engineers, United States Army
(Through the Division Engineer).
Subject: Abandonment or modification of river and harbor projects.

1. The following report as to the advisability of modifying or abandoning the present project for the improvement of the Calumet River, Ill., and Ind., is submitted in compliance with instructions.

2. The Calumet River, properly so called, is formed by the confluence of the Little and Grand Calumet Rivers near Hegewisch, Ill., about 7.83 miles from its mouth. It flows in a northerly direction and empties into Lake Michigan in Illinois near the Indiana boundary. It lies entirely in Cook County, Ill., and forms the inner harbor of Calumet Harbor.

3. The project provides for a channel 5.47 miles long, 200 feet wide, and 21 feet deep at Chicago city datum (the latter 1.7 feet below mean lake level, 1860–1875), from the Elgin, Joliet & Eastern Railway bridge near the old shore line in South Chicago, Ill., and 0.71 mile above the mouth of the river to the Forks where a channel connects the river with Calumet Lake, together with 5 turning basins of same depth as channel, for maintenance, and for the acquisition by donation to the United States of the necessary land for a channel 200 feet wide from the Forks upward via the Calumet and the Grand Calumet to a point one-half mile above Hammond, Ind. The construction of the turning basins was made contingent upon the donation of the necessary land to the United States free of cost.

4. A map showing the Calumet River project is forwarded herewith.

5. All original work of the present project has been completed excepting the widening of the channel from 100 feet to the project width of

200 feet for a distance of about 0.6 mile just below the Forks, which work it is expected to complete during the present season, and excepting also the construction of two turning basins (Nos. 2 and 4) for which the land has not been donated and the need for which is not yet urgent.

6. There is at present a channel of full project width and depth as far up as the Forks, except as noted above and except also in a few localities where maintenance dredging is required. There are three turning basins: No. 1 near Ninety-second Street, having a least diameter of about 700 feet and a depth of 21 feet; No. 3, on the east bank of the river between One hundred and fifteenth and One hundred and sixteenth Streets, with least diameter of 570 feet (but with an east and west dimension, including the river channel, of 700 feet) and depth of 21 feet; and No. 5, located at the Forks, where a narrow private channel connects the river with Lake Calumet, with least diameter of about 750 feet and present depth of from 18 to 20 feet, the project depth of 21 feet to which it was originally dredged having been reduced by shoaling.

7. The banks are generally docked for a distance of about $3\frac{1}{4}$ miles from the Elgin, Joliet & Eastern Railway bridge, above which point no enterprises are as yet located. From the Forks to the junction of the Grand and Little Calumet Rivers the channel is irregular and crooked, with widths varying from 65 to 130 feet and depth of about 4 feet.

8. The river is crossed by 12 bridges—4 bascule, 5 swing, 2 lift, and 1 temporary pontoon. Of these, 8 are railroad and 4 highway. The lowest vertical clearance is 5.4 feet and the narrowest draw opening 65 feet.

9. The principal difficulty in navigating the river from its mouth to the Forks at this time is due to existing conditions near Ninety-sixth Street, where three railroad bridges—one bascule and two lift—are being reconstructed. Work on these bridges is in progress and probably will be completed during the present season, after which the river will be reasonably free from obstructions and easy of navigation.

10. The maximum draft that can be carried is 20 feet. Fluctuations, due to atmospheric conditions, average considerably less than 1 foot per day.

11. Commerce for the three preceding years is reported as follows:

Year.	Tons.	Value.
1912	8,318,838	$157,475,603
1913	9,445,878	178,817,771
1914	6,519,576	162,000,344

Commerce increased steadily from the time the river was made available for large deep-draft boats until 1914, having grown from 3,783,674 tons in 1900 to 9,445,878 in 1913. The decrease in 1914 was almost entirely in iron ore, manufactured iron, and coal, and was due probably to general business depression, the lack of demand for iron having necessitated the closing down or running on much less than full capacity of the large furnaces.

12. There are no public docks, wharves, or other terminal facilities. The total dockage, including slips, is approximately 90,000 feet, of which 50 per cent or more is used by private interests for shipping purposes. All of the large industries are equipped with modern machinery and appliances for loading and unloading. The river is practically level with but little current, and there is no question of water-power development for commercial purposes, drainage, etc., involved in the improvement.

13. Grand Calumet River is practically a lagoon about 18 miles long, extending east and west, its upper end being in Lake County, Ind., about $3\frac{1}{2}$ miles above Gary Harbor, and its lower end being 1.65 miles above the Forks. The banks are very low and not well defined, but in general the width varies between 100 and 130 feet, with a depth of less than 4 feet from the junction to the Hohman Street Bridge in Hammond, Ind., a distance of about $2\frac{3}{4}$ miles. From this bridge to the Indiana Harbor Canal, approximately $2\frac{1}{2}$ miles, the river varies in width from 140 to 200 feet between banks, and in depth between 3 and 6 feet. Above this point the stream is considerably smaller.

14. The river and harbor act of August 11, 1888, carried an appropriation of $15,000 for improving the channel from the Forks to one-half mile east of Hammond, Ind., and a channel 60 feet wide and 10 feet deep was partially dredged. Due to the soft material of the river bed and banks and to deposits from slaughterhouses, manufacturing establishments, and sewers near Hammond, the channel filled up very rapidly and it was found practically impossible to maintain it, so the work was abandoned in 1895. There is no commerce or navigation except by small pleasure boats on this section of the river. The existing project, as has been stated above, includes acquisition by donation of land of channel 200 feet wide from the Forks to a point one-half mile above Hammond.

15. Between the Forks and a point one-half mile above Hammond the channel is crossed by eight swing and two bascule bridges, of which six are railroad and four highway. Least vertical clearance 6.72 feet and narrowest draw opening 40 feet. The principal difficulties in navigating this channel are insufficient depth, insufficient width, bridges, and bends in the river.

16. That portion of the project which provides for the "acquisition by donation of land for a channel 200 feet wide from the Forks to a point one-half mile above Hammond, Ind.," in my judgment requires modification only to the extent of altering the position of the upper limit of the proposed channel from the rather indefinite point "one-half mile above Hammond" to the definite and logical point "where the Indiana Harbor Canal intersects the Grand Calumet."

17. The Indiana Harbor project is stated on page 1166 and illustrated opposite page 2936 of the Annual Report of the Chief of Engineers for 1914, and includes the maintenance by the United States, after its excavation by private parties, of a canal 200 feet wide, 20 feet deep, and about $3\frac{1}{2}$ miles long connecting the Grand Calumet River with Indiana Harbor proper, where the United States is now building breakwaters to protect the entrance. Most of this canal is now dredged and a large part of it has been accepted by the United States for maintenance.

18. The acquisition by donation at this time of lands for a channel in the locality under consideration suitably wide and straight is a measure in the interest of the next generation perhaps, but it seems to me to be a very wise measure indeed. Interior or river channels hereabouts that are now in use are in large part ill adapted to the use of vessels by reason of their crookedness and narrowness. After industries grow up upon their banks the cost of acquiring the land for straightening and widening becomes prohibitive. In the case under consideration the lands bordering the stream are of small present value, and recently there has been legislation by the State of Indiana which will facilitate the acquisition by local municipal bodies of the lands needed and permitting these local municipal bodies to donate them to the United States.

19. The advisability of extending and definitely fixing at the point above suggested the upper limits of the lands to be acquired results from the obvious advantage that would follow from the possibility thus afforded of providing at some future time an interior belt waterway; and from the further advantage that would result from thus affording to the upper portions of the contemplated waterway a nearer exit to the lake.

20. I have had some difficulty in ascertaining just what is meant by "a point one-half mile above Hammond." In House Document No. 172, Fifty-eighth Congress, second session, upon which the existing project is based, the then district officer stated the distance from the junction to the point one-half mile above (east of) Hammond as 3.4 miles. It appears from maps, however, that the distance from the junction to the point described was at that time much greater. The first mention of this point appears to have been in the river and harbor act approved July 5, 1884, which directed a preliminary examination and survey of the Calumet from a point one-half mile east of Hammond to the Forks. The report upon this preliminary examination and survey is printed on pages 2059 et seq., Annual Report of the Chief of Engineers for 1885. At the time of this survey report it was assumed that the Hohman Street Bridge, in Hammond, marked the line beyond which the channel should extend one-half mile. On this hypothesis again the distance from the junction to the upper limit of the proposed improvement is 3.4 miles.

21. In 1884 the point actually one-half mile above Hammond was approximately 4.9 miles above the junction, or about 0.5 mile below the present intersection of the Grand Calumet River and the Indiana Harbor Canal. As Hammond is now, a point one-half mile above (east of) it (i. e., above or east of its eastern boundary) would be more than 2 miles above (east of) the intersection of the Grand Calumet with the Indiana Harbor Canal. But there is no logical reason for extending the project above the intersection with the canal.

22. To sum the matter up, I report that in my opinion the present project for Calumet River, Ill. and Ind., in so far as it covers the work of improvement and maintenance of the Calumet River from its lower limits to the Forks, including the turning basins, is adapted to the locality, adequate for present needs, and should not be abandoned or modified. And I report the same as to the remaining portion of the project, for the obtaining of lands by donation for a channel 200 feet wide from the Forks upward, but recommend that this part

of the project be modified so that its upper limit shall be at the intersection of the Grand Calumet and Indiana Harbor Canal.

W. V. JUDSON,
Lieut. Col., Corps of Engineers.

[First indorsement.]

OFFICE DIVISION ENGINEER, LAKES DIVISION,
Buffalo, N. Y., June 12, 1915.

To the CHIEF OF ENGINEERS, UNITED STATES ARMY.

1. Forwarded.

2. The opinion of the district officer that the present project be modified to define the upstream limit of the project channel to be at the junction of Grand Calumet River and the Indiana Harbor Canal is concurred in.

J. G. WARREN,
Colonel, Corps of Engineers.

[For report of the Board of Engineers for Rivers and Harbors, see p. 2.]

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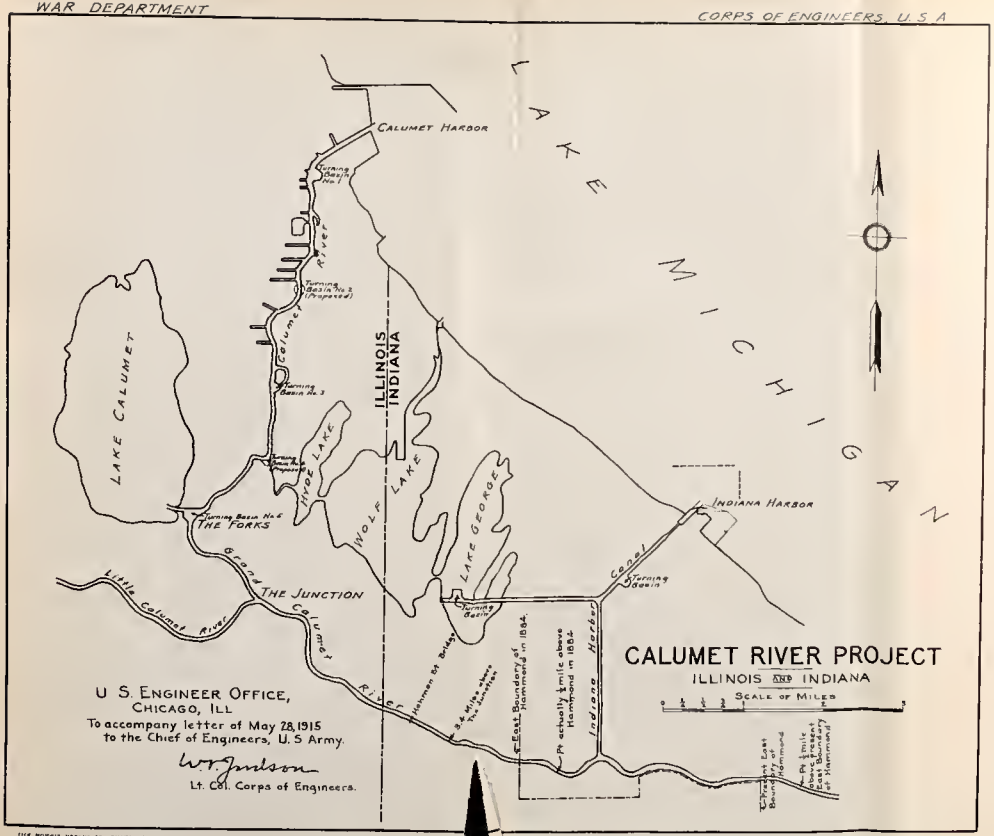
WAR DEPARTMENT

CORPS OF ENGINEERS, U. S. A.



U. S. ENGINEER OFFICE,
CHICAGO, ILL.
To accompany letter of May 28, 1915
to the Chief of Engineers, U. S. Army.

W. R. Judson
Lt. Col. Corps of Engineers.

CALUMET RIVER PROJECT
ILLINOIS AND INDIANA

SCALE OF MILES

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THE HORNIS HEYER CO. PHOTO LITHO WASHINGTON D. C.

House Doc. No. 470 ; 64th Cong., 1st Sess.